

**METHOD AND APPARATUS FOR SELF-REFERENCED
PROJECTION LENS DISTORTION MAPPING**

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ABSTRACT OF THE DISCLOSURE

A projection lens distortion error map is created using overlay targets and a special numerical algorithm. A reticle including an array of overlay targets is exposed several times onto a photoresist coated silicon wafer using a photolithographic stepper.

10 After exposure, the overlay targets are measured for placement error. The resulting overlay error data is then supplied to a software program that generates a lens distortion error map for the photolithographic projection system.

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